

Claim(s)

1. A method for power control in a communication system employing a Downlink Shared Control Channel (DSCH) and a Forward Access Control Channel (FACH), comprising:
applying power control on the Downlink Shared Control Channel;
deriving power control information from the power control on the Downlink Shared Control Channel; and
applying to the Forward Access Control Channel the derived power control information from the power control on the Downlink Shared Control Channel in order to produce power control on the Forward Access Control Channel.
2. The method of any one of claims 1 wherein the step of deriving power control information from the power control on the Downlink Shared Control Channel comprises deriving power control information from a radio network control power control function.
3. The method of any one of claims 1 wherein the step of deriving power control information from the power control on the Downlink Shared Control Channel comprises deriving power control information from a base station power control function.

4. The method of any one of claims 1 wherein the step of deriving power control information from the power control on the Downlink Shared Control Channel comprises deriving power control information from transport format combination set selection.
5. The method of any one of claims 1-4 wherein the step of applying power control information to the Forward Access Control Channel comprises scheduling a plurality of Forward Access Control Channels in dependence on the derived power control information.
6. The method of claim 5 wherein the step of scheduling comprises scheduling the plurality of Forward Access Control Channels based on a signal/interference difference power cost calculation.
7. The method of claim 5 or 6 wherein the step of scheduling comprises scheduling the plurality of Forward Access Control Channels based on fixed signal/interference values.
8. The method of claim 6 or 7 wherein the step of scheduling comprises scheduling the plurality of Forward Access Control Channels based on dynamically updated signal/interference values.

9. The method of any one of claims 1-8 wherein the step of applying power control information to the Forward Access Control Channel comprises queueing and serving of mobile stations with similar power requirements on a same Forward Access Control Channel at the same time.
10. The method of any one of claims 1-9 wherein the step of applying power control information to the Forward Access Control Channel comprises grouping mobile stations with similar power requirements on a same Forward Access Control Channel.
11. The method of any one of claims 1-10 wherein the step of applying power control information to the Forward Access Control Channel comprises grouping mobile stations with similar power requirements in a same scheduling interval of a same Forward Access Control Channel.
12. The method of any one of claims 1-11 wherein the system is a time division duplex communication system.
13. The method of any one of claims 1-12 wherein the system comprises a UMTS wireless system.
14. The method of claim 1-13 wherein the system comprises a 3GPP system.

15. An arrangement for power control in a communication system employing a Downlink Shared Control Channel (DSCH) and a Forward Access Control Channel (FACH), the arrangement comprising:

means for applying power control on the Downlink Shared Control Channel;

means for deriving power control information from the power control on the Downlink Shared Control Channel; and

means for applying to the Forward Access Control Channel the derived power control information from the power control on the Downlink Shared Control Channel in order to produce power control on the Forward Access Control Channel.

16. The arrangement of any one of claims 15 wherein the means for deriving power control information from the power control on the Downlink Shared Control Channel comprises means for deriving power control information from a network control power control function.

17. The arrangement of any one of claims 15 wherein the means for deriving power control information from the power control on the Downlink Shared Control Channel comprises means for deriving power control information from a base station power control function.

18. The arrangement of any one of claims 15 wherein the means for deriving power control information from the power control on the Downlink Shared Control Channel comprises means for deriving power control information from transport format combination set selection.

19. The arrangement of any one of claims 15-18 wherein the means for applying power control information to the Forward Access Control Channel comprises means for scheduling a plurality of Forward Access Control Channels in dependence on the derived power control information.

20. The arrangement of claim 19 wherein the means for scheduling comprises means for scheduling the plurality of Forward Access Control Channels based on signal/interference difference power cost calculation.

21. The arrangement of claim 19 or 20 wherein the means for scheduling comprises means for scheduling the plurality of Forward Access Control Channels based on fixed signal/interference values.

22. The arrangement of claim 19 or 20 wherein the means for scheduling comprises means for scheduling the plurality of Forward Access Control Channels based on dynamically updated signal/interference values.

23. The arrangement of any one of claims 15-22 wherein the means for applying power control information to the Forward Access Control Channel comprises means for queueing and serving of mobile stations with similar power requirements on a same Forward Access Control Channel at the same time.

24. The arrangement of any one of claims 15-23 wherein the means for applying power control information to the Forward Access Control Channel comprises means for grouping mobile stations with similar power requirements on a same Forward Access Control Channel.

25. The arrangement of any one of claims 15-25 wherein the means for applying power control information to the Forward Access Control Channel comprises means for grouping mobile stations with similar power requirements in a same scheduling interval of a same Forward Access Control Channel.

26. The arrangement of any one of claims 15-25 wherein the system is a time division duplex communication system.

27. The arrangement of any one of claims 13-26 wherein the system comprises a UMTS wireless system.

28. The arrangement of claim 13-27 wherein the system comprises a 3GPP system.

29. A network control element comprising the arrangement of claim 16 or any one of claims 18-28 when dependent from claim 16.

26. A base station element comprising the arrangement of claim 17 or any one of claims 18-28 when dependent from claim 17.